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Stretching The South's Softwood Saw-Timber Resource

By Hamlin L. Williston

Are we facing a timber shortage? Do we have a small land-owner forest management problem? And are the two related?

A report[1] on a recent conference states that there are two alternative perceptions. One views the independent land-owner situation as related to a national timber supply problem since these owners supplied 38 per cent of the softwood and 76 per cent of the hardwood harvested in 1970. A contrasting view holds that the independent land-owners compare favorably with the forest industry and National Forest lands in terms of volume, growth, and productive capacity when regional differences are considered. The latter viewpoint also usually accepts the notion that serious future supply problems are unlikely.

There are 51 forest survey units in the 12-state area served by the Southeastern and Southern Forest Experiment Stations. Recency of survey data ranges from 11 years in Arkansas and part of South Carolina to one year in Mississippi, Virginia and part of South Carolina. During the past decade there have been substantial changes both in the forest resource and the forest products manufacturing facilities dependent upon the resource. Any interpretation of the data is therefore subject to these changes and the interpreter's evaluation of the effect of these changes.

Table 1 summarizes annual softwood growth and removals in millions of cubic feet by ownership classes; Table 2 in millions of board feet. Not quite half the growth is being cut annually on the National Forests. On other public and the farmer and miscellaneous private ownerships, approximately two-thirds of the growth is being removed each year. Forest industry is cutting 94 per cent of the cubic growth and 105 per cent of the board foot growth.

Only in Virginia's Coastal Plain survey unit does the cut exceed the growth on the farmer and miscellaneous private (independent) ownerships. However in 13 of the major pine producing survey units industry is cutting more than the growth on their lands. These units are: Alabama: Southwest-North; Arkansas: Southwest; Georgia: Southeast; Louisiana: Northwest, Southeast, Southwest[2]; Mississippi: Central, South[1], Southwest; North Carolina: North Coastal Plain, South Coastal Plain; Oklahoma: Southeast; Virginia: Coastal Plain.

"Short Rotation" Forestry

It was once a common practice for industry to buy as much timber as possible on the open market in order to conserve their own timber for a "rainy day." Today many companies are converting their lands to short rotation forestry. This accounts for

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[1]Sedjo, R. A. and Ostermeier, D. M. 1978. Policy alternatives for non-industrial private forests. Society of American Foresters. 64 p.
[2]Sawtimber only

FIGURE 1.—*Land-owners with stands like this can cut 25 per cent of the volume every 6-10 years depending upon the site of quality. Careful logging will enable the pine regeneration to restock the "holes" in the over story. (Picture courtesy office of Forestry, Louisiana Department of Natural Resources)*

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much of the "over-cutting" of saw-timber. Furthermore thousands of acres of pine plantations have not attained sufficient size to be merchantable for pulpwood, let alone saw-timber. It is impossible for an outsider to analyze the timber supply outlook for each company, but I would hope that their chief executives are doing some long-range planning.

Seemingly the National Forests, now cutting but half the growth, could step up their cut to meet demand. They are, however, dedicated to long rotations and are still building up their growing stock. Furthermore, lawsuits and legislative action dictating changes in management policy make any substantial increase in cut questionable.

In light of the foregoing it is clear why all concerned have turned to the independent land-owner to provide the increased cut necessary to support continued growth of the nation's economy. Not only are they growing a surplus of 1.3 billion cubic feet or nearly five-Billion board feet each year but they own roughly 93 million acres capable of growing pine, much of which is understocked.

Let us arbitrarily define a major pine producing unit as one with an annual growth of 50 million cubic feet (approximately 667M cords) or 200 million board feet. There are 34 of the former and 32 of the latter. All are in the Coastal Plain or Piedmont. None are in the mountains or in Tennessee.

Survey Reports

A close look at the most recent survey reports for these units reveals that there are six or seven survey units in which growth on the independently-owned lands substantially exceeded the drain. Those categorized by "surplus" were:

More than 75 million cubic feet (1 million cords)—Georgia: Central and North Central; South Carolina: Piedmont.

37.5—75 million cubic feet—Alabama: North Central, West Central and Southeast Arkansas: Southwest, Louisiana: Northwest, North Carolina: Piedmont.

300 million board feet or more—Georgia: Central, Louisiana: Northeast, South Carolina: Piedmont.

200—300 million board feet—Alabama: Southeast, Georgia: North Central, North Carolina: Piedmont.

Shortly after these survey reports, industry increased its milling capacity or announced plans for new mills in all of these units except the North Carolina Piedmont. To support this increased milling activity, management assistance programs should be intensified in these units to prevent premature liquidation of the growing stock. We also need an analysis by a knowledgeable utilization specialist of how much the milling capacity in all softwood survey units has increased since the time of the last survey.

The forest survey reports also summarize timber removals from growing stock. It is readily apparent in studying this data that better utilization would stretch the supply available for the manufacture of dimension and plywood. For example, roughly 30 per cent of the 16 billion board feet of saw-timber cut goes to the pulp-mill and 619 million board feet are left in the woods. More and more papermills are going to integrated operations in which the sawlogs are diverted before reaching the chipper but improvident utilization is still a serious problem.

Here and there, there may be untapped pockets of timber but it is my opinion that the quickest way to increase future supplies is to embark upon an intensive timber stand improvement (TSI) program where there is a pine seed source and stands of understocked pine. This measure was successfully used on a large scale in southwest Arkansas and north Louisiana where much of the sawtimber today is the result of intensive TSI efforts in the late 1940's and 1950's. Furthermore, many independent landowners prefer to use uneven-aged management in their pine stands. Partial cuts at periodic intervals in these stands prevent premature harvesting of many a potential, high quality sawlog pine.

But for the long pull a stepped-up pine planting effort is needed, particularly in cut-over areas with no seed source. To accomplish this we need greater seedling production from the nurseries, better quality control, support from the policy makers, positive effort and action by all foresters, and understanding and support from the public.

TABLE 1.—*Annual softwood growth and removals by ownership classes*

State	National Forest		Other public		Forest industry		Farmer and miscellaneous private	
	Growth	Removals	Growth	Removals	Growth	Removals	Growth	Removals
	Million cubic feet							
Alabama	24.4	10.4	13.1	10.7	188.1	139.1	562.4	365.9
Arkansas	52.7	27.5	4.4	5.0	150.9	149.7	182.5	98.8
Florida	41.2	9.4	25.7	13.5	145.7	114.0	220.5	152.9
Georgia	26.4	9.2	47.5	33.4	210.0	180.2	869.2	560.9
Louisiana	31.7	22.8	9.4	5.7	180.7	193.2	382.3	219.5
Mississippi	56.6	27.5	18.6	20.5	122.0	128.1	392.0	321.8
North Carolina	17.9	7.8	17.7	18.0	60.7	92.3	439.4	319.3
Oklahoma	6.8	4.5	2.9	.3	27.3	34.5	18.9	7.4
South Carolina	35.9	29.1	22.5	7.2	101.1	78.2	362.0	196.6
Tennessee	14.1	3.4	11.4	1.4	9.9	1.1	67.5	27.3
Texas	37.8	15.6	6.8	2.6	170.4	171.2	270.2	192.1
Virginia	6.8	5.0	10.8	10.3	52.2	46.3	177.6	143.5
Total	352.3	172.2	190.8	128.6	1,419.0	1,328.9	3,944.5	2,606.0
Percentage		48.9		67.4		93.7		66.1

TABLE 2.—*Annual softwood sawtimber growth and removals by ownership classes*

State	National Forest		Other public		Forest industry		Farmer and miscellaneous private	
	Growth	Removals	Growth	Removals	Growth	Removals	Growth	Removals
	Million board feet							
Alabama	108.0	57.3	57.8	51.3	796.8	600.6	2,190.9	1,435.1
Arkansas	235.5	138.5	17.6	23.0	721.1	760.2	595.8	371.2
Florida	139.0	21.2	104.6	51.8	431.7	375.2	647.2	485.8
Georgia	108.5	35.4	196.7	134.8	712.1	664.0	2,990.8	2,084.0
Louisiana	182.0	118.4	54.1	28.6	829.1	1,010.7	1,588.7	977.8
Mississippi	321.2	154.1	119.1	110.5	497.6	635.8	1,767.7	1,442.2
North Carolina	80.4	32.2	74.7	67.2	185.5	384.9	1,700.2	1,201.4
Oklahoma	26.2	27.4	7.0	1.2	133.9	165.1	75.1	28.8
South Carolina	156.0	107.9	85.4	30.2	334.8	280.8	1,255.2	698.2
Tennessee	51.9	18.6	40.2	2.4	32.4	4.5	184.5	98.5
Texas	200.5	79.3	32.4	12.0	870.1	883.2	1,220.4	857.1
Virginia	27.9	17.4	44.5	39.4	127.2	167.3	626.4	490.3
Total	1,637.1	807.7	834.1	552.4	5,672.3	5,932.3	14,842.9	10,170.4
Percentage		49.3		66.2		104.6		68.5

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